

CLAIM SET AS AMENDED

1.(Currently Amended) An organic waveguide comprising: ✓

a substrate;

a buffer layer over the substrate;

a core section over the buffer layer, the core section being made of organic polymer; and

a clad section covering an upper surface of the core section and made of inorganic dielectric having a lower refractive index than that of the core section, the inorganic dielectric consisting essentially of silicon oxide, and the clad section has substantially the same shape and closely conforms to the core section, wherein an adhesive layer for improving adhesion between the organic polymer and the inorganic dielectric is provided between the core section and the clad section.

2.(Cancelled)

3.(Original) The organic waveguide as set forth in claim 1, wherein a portion of the clad section constitutes a masking clad section which serves as a mask when processing the core section.

4.(Canceled)

5.(Original) The organic waveguide as set forth in claim 1, wherein a light-shield film is formed around the core section including the clad section.

6. (Canceled)

7.(Original) The organic waveguide as set forth in claim 1, wherein the inorganic dielectric constituting the clad section is silicon oxide.

8.(Canceled)

9.(Original) The organic waveguide as set forth in claim 1, wherein a main component of the organic polymer constituting the core section is polyimide.

10.(Canceled)

11.(Original) The organic waveguide as set forth in claim 9, wherein the polyimide is a polyimide containing no silane.

12.(Canceled)

13.(Original) The organic waveguide as set forth in claim 9, wherein the polyimide is a fluorinated polyimide.

14.-16. (Canceled)

17.(Currently Amended) The organic waveguide as set forth in ~~claim 15~~ claim 1, wherein the adhesive layer is formed before the organic polymer to be the core section is subjected to thermal polymerization.

18-40.(Cancelled)

41.(Previously Presented) The organic waveguide as set forth in claim 1, wherein the upper surface of the organic polymer layer has been subjected to a plasma process before the inorganic dielectric was formed on the organic polymer.

42.(Previously Presented) The organic waveguide as set forth in claim 3, wherein the upper surface of the organic polymer layer has been subjected to a plasma process before the inorganic dielectric was formed on the organic polymer.

43.(Previously Presented) The organic waveguide as set forth in claim 41, wherein the plasma process is carried out using a gas containing at least an oxygen element.

44.(Previously Presented) The organic waveguide as set forth in claim 42, wherein the plasma process is carried out using a gas containing at least an oxygen element.

45.(Previously Presented) The organic waveguide as set forth in claim 41, wherein the plasma process is carried out using a gas containing at least a nitrogen element.

46.(Previously Presented) The organic waveguide as set forth in claim 42, wherein the plasma process is carried out using a gas containing at least a nitrogen element.

47-51.(Cancelled)

52.(Currently Amended) An optical part, which comprises:
an organic waveguide; and

an optical element selected from the group consisting of a photo-emitting element, a photo-receptive element and a lens, wherein the organic waveguide and the optical element are formed on a single substrate,

and the organic waveguide comprises:

a buffer layer over the substrate;

a core section over the buffer layer, the core section being made of organic polymer; and

a clad section covering an upper surface of the core section and made of an inorganic dielectric having a lower refractive index than that of the core section, the inorganic dielectric consisting essentially of silicon oxide, and the clad section has substantially the same shape and closely conforms to the core section, wherein an adhesive layer for improving adhesion between the organic polymer and the inorganic dielectric is provided between the core section and the clad section.

53.(Previously Presented) The optical part as set forth in claim 52, wherein the inorganic dielectric of the clad section is formed by a sputtering method, a CVD method or a vapor deposition method.

54.(Previously Presented) The optical part as set forth in claim 52, wherein a portion of the clad section comprises a masking clad section which serves as a mask when processing the core section.--

55.(Previously Presented) The organic waveguide as set forth in claim 1, wherein the clad section has a thickness of several microns.--

56.(Previously Presented) The organic waveguide as set forth in claim 1, wherein the clad section has a thickness of about 2 microns.

57. (Previously Presented) The organic waveguide as set forth in claim 1, wherein the clad section has been formed by sputtering, CVD or vapor deposition.